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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,904	02/28/2002	Jon Gelsey	042390.P13786	4050

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EXAMINER

ALEJANDRO, RAYMOND

ART UNIT PAPER NUMBER

1745

DATE MAILED: 12/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

10/086,904

Applicant(s)

GELSEY, JON

Examiner

Raymond Alejandro

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 4-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,10-14 and 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 04/12/02. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, and particularly Species 2 (claims 2-3, 10-14 and 24-29) in the paper dated 11/10/2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 04/12/02 was considered by the examiner.

Drawings

3. The drawings were received on 02/28/02. These drawings are acceptable.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," "The present disclosure", etc.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 2-3, 10-14 and 24-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Long et al 5702491.

The present application is directed to an apparatus wherein the disclosed inventive concept comprises the specific hydrogen generators coupled to a fuel cell.

With respect to claims 2-3 and 12:

Long et al teach a portable hydrogen generator (TITLE/COL 1, lines 8-10/COL 12, lines 24-26) which utilizes both exothermic and endothermic reactions therein (COL 8, lines 1-17). It is disclosed that the heat generated by exothermic reaction of the LiAlH_4 is used to generate additional hydrogen by the endothermic thermal decomposition (COL 8, lines 1-17/COL 4, lines 2-9). *Thus, the disclosed hydrogen generator itself is capable of being simultaneously used as both the exothermic hydrogen generator and the endothermic hydrogen generator*. It is also taught that hydrogen generated in the hydrogen generator is supplied for used to a fuel cell (COL 4, lines 54-60).

As to claims 10-11:

Long et al teach fuel cells (COL 4, lines 54-60/ COL 5, lines 54-56). *It is thus noted that the thermal characteristics of the fuel cell are inherent to the same fuel cell application therein.*

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Regarding claims 13 and 24-25:

Long et al disclose that the primary candidates for use with the hydrogen generator as the primary chemical hydride includes NaBH_4 (COL 5, lines 57-63). It is disclosed that the ternary hydrides can be in liquid state (COL 5, line 60-61). TABLE II shows excess water reaction (TABLE II). *Thus, it does encompass the formation of aqueous solutions of chemical hydride materials.*

On the matter of claims 14 and 26-27:

Long et al also makes known that metal hydrides can be used as the chemical hydride (COL 3, lines 8-16/ COL 3, line 67 to COL 4, line 9/COL 5, lines 49-56/ TABLE I).

With reference to claims 28-29:

Long et al further disclose the use of a control unit for controlling the amount of hydrogen generated or the rate of hydrogen generation (COL 2, line 66 to COL 3, line 7/COL 5, line 10-26) wherein the generation of hydrogen is maintained stable and controllable through balancing exothermic and endothermic reactions (COL 8, lines 1-18).

Thus, the claims are anticipated.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (703) 306-3326. The examiner can normally be reached on Monday-Thursday (8:30 am - 7:00 pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (703) 308-2383. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Raymond Alejandro
Examiner
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A handwritten signature in black ink, appearing to read 'RAM', with a long horizontal flourish extending to the right.